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USP 4,317,800 discloses a process for reducing environmental pollution resulting from disposal of waste-containing halogenated hydrocarbons by some simultaneous treatment with used metal and/or metal scrap at elevated temperatures. The halogenated hydrocarbons are pyrolyzed, and the resulting hydrogen halide-containing gas is brought into contact with the metal at elevated temperatures so as to form halogenites that are volatile under the conditions supplied.

WO 95/33686 discloses a method for extracting metals from metal-containing materials, especially waste, by pyrohydrolysis. The metal-containing materials are made to react at 700-1100°C, with gas a composition comprising 25 - 45% water vapor, 0.1% carbon dioxide, 2 - 20% hydrogen chloride and 0-15% carbon monoxide, the remainder being nitrogen and possibly oxygen, and the metals are extracted in the form of volatile metal chlorides.

WO 95/22373 discloses a method for removing pollutants consisting of heavy metals and toxic elements from fly ash and few purification residues resulting from waste incineration. The waste is subjected to chlorination, thermal treatment, sulfuration for the twofold purpose of the removal and concentration of a fraction containing heavy metals and toxic elements.

IN THE CLAIMS

Please cancel claims 1 - 43 and substitute therefore claims 44 - 84 as follows:

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Sub B1  
-- 44. A highly efficient recovery process for the treatment of multi-element wastes which comprises the steps of:  
a) a primary heat treatment of the waste in the presence of a controlled amount of oxygen;  
b) after the completion of said heat treatment, halogenation of the product of said heat treatment by treatment with chlorine, bromine or a mixture thereof, in the presence of a halogenation catalyst; and